

## Part I : Neck Pain – An Ancient View

### Part II: Complementary effect of Mind Sound Resonance Technique as an add on Programme in Patients undergoing Conventional treatment for Common Neck Pain

By

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#### ABSTRACT

**Background:** Neck pain is one of the very common complaints. Conventional treatment methods with drugs, physiotherapy & exercises are some of the options in treating neck pain.

**Aim:** To evaluate the efficacy of addition of yoga based relaxation technique MSRT on reduction of pain, stiffness, neck flexibility, neck disability and on the state of anxiety and depression in patients undergoing physiotherapy treatment for common neck pain.

**Methods:** In the present randomized control trial sixty patients suffering from common neck pain were randomly assigned to two groups (Yoga Group (YG), n=30) and (Control Group (CN), n=30). Both the groups were assessed with Pain Analog Scale (PAS), tenderness (TN), neck movements including flexion (F), extension (E), right lateral flexion (RLF), left lateral flexion (LLF), right lateral rotation (RLR), left lateral rotation (LLR), and neck disability score & state trait anxiety inventory (STAI) standard questionnaire in the pretest, on 1st day and the same was repeated on the 10th day in the post test. During these 10 days, the Yogic Group (YG) received meditative technique called Mind Sound Resonance Technique (MSRT) for 25-35 mins with guided Quick Relaxation Technique QRT after the regular physiotherapy of 30 mins and the Control Group (CN) had Non-guided supine rest for the same period after physiotherapy. At the end of the Study, there were 28 subjects in the YG group and 26 in the CN group.

**Results:** When the assessments were done on the tenth day, in the post test, yoga group showed significant reduction in pain, improvement of neck

movements and decreased scores of NDS (neck disability score) & STAI (state anxiety inventory) compared to the control group.

Analysis of outcomes in categories of pain and neck flexibility showed a decrease within both the groups in wilcoxon test for pain analog scale( $p<0.01$ ), flexion ( $p<0.01$ ), extension ( $p<0.01$ ), right lateral flexion ( $p<0.01$ ), left lateral flexion ( $p<0.01$ ), right lateral rotation ( $p<0.01$ ), left lateral rotation ( $p<0.01$ ), neck disability score ( $p<0.01$ ), and blood pressure systolic( $p<0.01$ ), where as stress score STAI, BP diastolic and pulse reduced significantly only within the yoga group but not in control group. Comparison of the pre values using the Mann-Whitney test between the two groups showed no significant differences. Comparison of the post values by using Mann-Whitney test showed a significant difference in pain analog scale ( $p<0.01$ ), tenderness ( $p<0.01$ ), flexion ( $p<0.01$ ), extension ( $p<0.01$ ), right lateral flexion ( $p<0.01$ ), left lateral flexion ( $p<0.01$ ), right lateral rotation ( $p<0.01$ ), left lateral rotation ( $p<0.01$ ), neck disability score ( $p<0.01$ ), state anxiety inventory( $p<0.01$ ), Blood pressure ( $p<0.01$ ), and pulse rate ( $p<0.01$ ).

But the magnitude of change was more in yoga group compared to Control group.

**Conclusions:** The results suggest that an add on yoga relaxation technique called mind sound resonance technique provides significantly better improvement than supine rest following the standard physiotherapy treatment in patients with common neck pain.

## **SUMMARY**

1. The present Randomized controlled study was designed to assess the efficacy of addition of yogic relaxation technique, Mind Sound resonance technique, on pain and flexibility in patients with common neck pain.
2. In this study subjects registered for physiotherapy for common neck pain were chosen ( $n=60$ , age range - 20 to 70 yrs, males 32 and 28 females). Subjects were divided into 2 groups of 30 each. Control

group had 15 females and 15 males, yoga group 13 females and 17 males.

3. The yoga group had the intervention on MSRT while the control group had non guided supine rest.
4. The parameters PAS, TN F, E, RLF, LLF, RLR LLR, NDS and STAI were taken on the 1st and the 10th day. B.P and Pulse were taken before, during and after the intervention on the 1st and 10th day.
5. The base line values for intervention and control group was checked for normal distribution by using Shapiro-Wilk Test. Since the parameters were not normally distributed non parametric tests were used.
6. Wilcoxon's signed rank test was done to compare means before and after intervention.
7. The difference in pre and post values between the two groups was assessed by Mann – Whitney test.
8. Analysis of outcomes in categories of pain and neck flexibility indicated significant difference between the groups by Mann Whitney test. Result were significant for pain analog scale ( $p<0.01$ ), tenderness ( $p<0.01$ ), flexion ( $p<0.01$ ), extension ( $p<0.01$ ), Right lateral flexion ( $p<0.01$ ), left lateral flexion ( $p<0.01$ ), right lateral rotation ( $p<0.01$ ), left lateral rotation ( $p<0.01$ ), Neck disability score ( $p<0.01$ ), & stress questionnaire, state and trait anxiety inventory score ( $p=0.01$ ).

Improvement in flexibility pain reduction was observed better in the Yoga group compared to the control group at the end of 10th day. B.P and pulse rate too showed significant difference between & within the groups.

The present study shows that add on yoga guided relaxation MSRT and QRT reduced pain, improved flexibility and reduced the stress better than add on supine rest in patients with CNP.

**Keywords:** Neck Pain, Mind Sound Resonance Technique, Conventional treatment